UNITED STATES PATENT AND TRADEMARK OFFICE

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10/040,773	12/28/2001	Benn Bollay	10547-0016-999	2128

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EXAMINER
SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/040,773	BOLLAY ET AL.
	Examiner	Art Unit	
	Gregory B. Sefcheck	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 August 2007</u>.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-25</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 8/1/2007 is acknowledged.

- Claim 23 has been amended. The previous rejection of claim 23 under 35 USC 101 is withdrawn in light of the amendment.

- The previous double patenting rejections of claims 1, 14, and 23 are withdrawn in light of the Terminal Disclaimer filed 8/1/2007.

- Claims 1-25 remain pending.

Specification

1.   The disclosure is objected to because it contains embedded hyperlinks on pg. 1, lines 11-14 of the Specification. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-4, 7-10, 14-16, and 18-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mayer.

- Regarding Claims 1, 3, 7, 14-16, and 21-24,

Mayer discloses a method and apparatus for analyzing one or more firewalls (Title). Referring to Fig. 1, Mayer shows that a query (packet) requesting a particular service and indicating a source and destination IP addresses is received at a firewall 120,150 (Col. 8, lines 48-53; meets claim 1,14,21,22,23 – receiving a packet containing a request for content at a content filtering router/IP device; claim 1,14,21,22,23 - packet comprising a first destination IP address of a content server).

Mayer shows that the received query is processed by simulating the behavior of all packets described by the query as the traverse the network (Col. 10, lines 10-11). This is performed by firewall anaylsis tool 200 (Fig. 2), which evaluates the query object against the filtering files for each gateway (filtering router) specified gateway-zone graph 300 (routing table) generated for the query (Col. 6, lines 25-40; claim 3,21,24 – ascertaining through which output port said packet should be forwarded based on first IP address and a routing table stored on filtering router).

Mayer shows propagating the query over all the edges in the gateway-zone graph, each edge representing a firewall (or router) interface (Col. 10, lines 27-38). Mayer shows that each firewall interface has its own unique IP address. Therefore, disclosure of the query processing in Mayer is equivalent to determining if the destination of a query is on a list of addresses to be filtered (corresponding to each gateway/firewall) and propagating the query to the IP addresses of each of those multiple gateway/firewall (levels of filtering routers) thus determined (claim

1,14,21,22,23,24 – determining if first destination IP address is on a list of addresses to be filtered; claim 1,14,21,22,23,24 – packet comprising/adding second destination IP address of content filtering router; claim 1,21 – routing packet to an output port on filtering router based on first destination IP address and list; claim 14,22,23,24 – sending packet toward content filtering router; claim 7 – sending packet to an additional content filtering router, packet comprising third IP address; claim 15 – prior to adding, determining how many filtering levels the request is subject to; claim 16 – adding additional IP address for each level).

Each gateway node inherently comprises a CPU and memory containing an operating system for carrying out the above-described procedures (instructions; claim 21,22 – filtering router comprising CPU and memory containing operating system; claim 23 – computer readable storage containing stored computer program of instructions).

-    Regarding Claims 2 and 8,

Mayer discloses a method and apparatus for analyzing one or more firewalls that meets all limitations of the parent claim.

Mayer shows that the service requested by a query will not be provided to a user until a "pass" or "drop" (blocked) action is verified at each gateway specified in the query (Col. 5, lines 45-47; meets claim 2 – determining comprises ascertaining that first IP address is on list; claim 2 – routing comprises directing packet someplace other than first IP address; claim 8 – sending packet to a service provider that can notify a user who made request that content has been blocked).

- Regarding Claims 4, 9, and 10,

Mayer discloses a method and apparatus for analyzing one or more firewalls that meets all limitations of the parent claim. Mayer shows that the firewall's configuration interface defines the ranges of IP addresses, the protocols and corresponding port-numbers (Col. 5, lines 38-43; Col. 6, lines 5-10; meets claim 4 – utilizing a routing protocol to determine said output port; claim 9 – accepting first IP address and associated output port; claim 9 – storing first IP address and associated output port in list; claim 10 – saving first IP address and associated port in routing table).

- Regarding Claims 18-20,

Mayer discloses a method and apparatus for analyzing one or more firewalls that meets all limitations of the parent claim. Mayer shows that the query processing commences by performing a gateway-zone graph search according to the source host-group and the service (indicator) of the query (Col. 10, lines 14-26; meets claim 18 – acquiring source IP address and indicator of whether content filtering service is to be applied; claim 18 – storing source IP address and indicator; claim 19 – obtaining a filtering level associated with source IP address)

As shown above, the graph search evaluates the query object against each rule-base for each gateway node in the graph (Col. 10, lines 23-26; claim 20 – acquiring list of filtering levels and associated additional IP addresses, each filtering level associated with different additional IP address of different filtering router; claim 20 – storing list of filtering levels and associated additional IP addresses).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mayer in view of Shah (US006260070B1).

- Regarding Claims 5 and 6,

Mayer discloses a method and apparatus for analyzing one or more firewalls that

meets all limitations of the parent claim.

Mayer does not explicitly disclose the use of BGP or a BGP routing table.

Shah discloses requesting and selecting services available over the Internet by

utilizing border gateway protocol, including referencing a BGP routing table (Abstract;

Fig. 5; claim 5 – routing protocol is BGP; claim 6 – routing table is BGP table).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to implement the method and apparatus of Mayer by utilizing Border Gateway

Protocol and BGP routing tables, as shown by Shah. This would enable the method of

Mayer to be applied to networks utilizing BGP for communication between gateways in

a network.

6.   . Claims 11-13, 17, and 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Mayer.

-   Regarding Claims 11-13, 17 and 25,

Mayer discloses a method and apparatus for analyzing one or more firewalls that

meets all limitations of the parent claim.

Mayer does not explicitly disclose routing content requests to the content server

and receiving the content without forwarding the requests to any filtering routers when

the first IP destination is not included on a list of addresses to be filtered.

However, in the disclosure of Mayer, if a query is not restricted in the filtering files

of any gateways, it will be allowed to pass unrestricted (claim 11 – ascertaining that first

IP address is not on list; claim 12 – removing second IP address from packet; claim 13

– directing packet toward first IP address; claim 17,25 – receiving content from server,

where first IP address was not on a routing table of filtering router).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to implement the method and apparatus of Mayer by routing content requests

to the content server and receiving the content without forwarding the requests to any

filtering routers when the first IP destination is not included on a list of addresses to be

filtered, thereby completing the content request since no filtering is required.

Response to Arguments

7.   Applicant's arguments filed 8/1/2007 have been fully considered but they are not persuasive.

- In the Remarks on pgs. 12-13 of the Amendment, Applicant contends that the disclosure of Mayer does not teach each and every one of the claimed elements because Mayer is directed to simulation for firewalls. Applicant further contends that Mayer's disclosure of routers that perform packet filtering functions in a network environment does not meet the claimed limitations of a "content filtering router".

- The Examiner respectfully disagrees. The Mayer reference has been applied to the pending claims based upon disclosure of routers that perform packet filtering based upon destination IP addresses, where a packet is regarded as "content" to be filtered, meeting the limitations regarding "content filtering", as claimed. Mayer's disclosure of "simulation" does not exclude Mayer from disclosing the elements of the pending claims. As shown in the rejections, Mayer's disclosure of filtering packets (content) based upon comparing the destination IP address with gateway-zone graph 300 (routing table) meets the explicit limitations of the pending claims. Disclosure of these elements in the context of either network simulation, implementation, or operation is irrelevant.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-

272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GBS *GSS*
10-1-2007

10/9/07

WING CHAN
SUPERVISORY PATENT EXAMINER